

IN THE CLAIMS:

The following is a complete listing of the pending claims:

1. (currently amended) An optical data storage device comprising:

a substrate having oppositely facing first and second surfaces;

a first metal/alloy layer overlaying the first surface of the substrate, wherein the first metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

a first silicon oxynitride layer overlaying the first metal/alloy layer, ~~wherein the first metal/alloy layer is positioned between the substrate and the first silicon oxynitride layer, and~~ wherein a thickness of the first silicon oxynitride layer and an index of refraction of the first silicon oxynitride layer are selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer, and wherein no further layers overlay the first silicon oxynitride layer.

2. (previously presented) The optical data storage device of claim 1 further comprising:

a second metal/alloy layer overlaying the second surface of the substrate, wherein the second metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

a second silicon oxynitride layer overlaying the second metal/alloy layer, wherein the second metal/alloy layer is positioned between the substrate and the second silicon oxynitride layer.

3. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer has a cross-sectional thickness between 40nm and 125nm.

LAW OFFICES OF
MACPHERSON KWOK CHEN &
HEID LLP
2402 MICHELSON DRIVE
SUITE 310
IRVING, CA 95012
(949) 752-7040
FAX (949) 752-7049

4. (previously presented) The optical data storage device of claim 1 wherein the first silicon oxynitride layer has a cross-sectional thickness between 20nm and 120nm.
5. (previously presented) The optical data storage device of claim 1 wherein the first silicon oxynitride layer has a cross-sectional thickness of approximately 60nm and the first metal/alloy layer has a cross-sectional thickness of approximately 85nm.
6. (original) The optical data storage device of claim 1 wherein the substrate comprises a rigid material.
7. (original) The optical data storage device of claim 1 wherein the metal/alloy layer comprises $\text{Sb}_{70}\text{Sn}_{15}\text{In}_{15}$.
8. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer is formed using a sputtering technique.
9. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer is formed using a vapor deposition technique.
10. (previously presented) The optical data storage device of claim 1 wherein a real part of refractive index for the first silicon oxynitride layer is between 1.4 and 2.0.

LAW OFFICES OF
MACPHERSON KWOK CHEN &
HEID LLP
2402 MICHELSON DRIVE
SUITE 210
IRVINE CA 92612
(949) 752-7040
FAX (949) 752-7049

11. (original) The optical data storage device of claim 1 wherein the first surface of the substrate is grooved, wherein grooves of the first surface define raised surface portions, recessed surface portions, and side walls therebetween.

12. (original) The optical data storage device of claim 1 wherein the first metal/alloy layer comprises a grooved surface, wherein grooves of the first metal/alloy layer define raised surface portions, recessed surface portions, and side walls therebetween, wherein the raised surface portions are configured to store optical data.

13. (currently amended) A method comprising:

forming a first metal/alloy layer overlaying a first surface of a substrate wherein the first metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

forming a first silicon oxynitride layer overlaying the first metal/alloy layer, wherein the first silicon oxynitride layer has a thickness and an index of refraction selected to enhance an optical contrast between an amorphous state of the first metal/alloy layer and a crystalline state of the first metal/alloy layer, and wherein the first metal/alloy layer is positioned between the substrate and the first silicon oxynitride layer and no further layers overlay the first silicon oxynitride layer.

14. (previously presented) The method of claim 13 further comprising:

forming a second metal/alloy layer overlaying a second surface of the substrate, wherein the second metal/alloy layer comprises tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc, and;

LAW OFFICES OF
MACPHERSON KWOK CHEN &
HUI
2103 MICHELSON DRIVE
SUITE 210
IRVINE CA 92614
(949) 752-7040
FAX (949) 752-7049

forming a second silicon oxynitride layer overlaying the second metal/alloy layer, wherein the second metal/alloy layer is positioned between the substrate and the second silicon oxynitride layer.

15. (original) The method of claim 13 wherein the first metal/alloy layer has a cross-sectional thickness between 40nm and 125nm.

16. (original) The method of claim 13 wherein the first dielectric layer has a cross-sectional thickness between 20nm and 120nm.

17. (original) The method of claim 13 wherein the substrate comprises a rigid material.

18. (original) The method of claim 13 wherein the metal/alloy layer comprises $\text{Sb}_{70}\text{Sn}_{15}\text{In}_{15}$.

19. (original) The method of claim 13 wherein the first metal/alloy layer is formed using a sputtering technique.

20. (original) The method of claim 13 wherein a real part of refractive index for the first dielectric layer is between 1.4 and 2.0.

21. (cancelled)

LAW OFFICES OF
MACPHERSON KWOK CHEN &
REID LLP
3402 MICHELSON DRIVE
SUITE 210
IRVINE CA 92612
(949) 752-7040
FAX (949) 752-7040